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Okay, got it

Lyam Thomas Christopher

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The Living, Electric Universe

From the Stars to the Earth to You



Photo by James Maciariello

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you should find yourself outside in a wide-open space with your hair standing on end and your upheld hands spewing blue sparks, don't be alarmed. It's just Saint Elmo's fire. Take a look at the following entries from two different dates in the travel diary of Charles Darwin (1832):

- If
- At this present minute, we are at anchor in the mouth of the river, and such a strange scene it is. Everything is in flames — the sky with lightning, the water with luminous particles. And even the very masts are pointed with blue fire....
 - I have just been on deck. The night presented an extraordinary spectacle — the darkness of the sky was interrupted by the most vivid lightning. The tops of the masts and higher yard ends shone with electric fluid playing about them.... To complete these natural fireworks, the sea was so highly luminous that the penguins could be tracked by the streams of light in their wake. *

Modern scientists would be quick to point out that these two phenomena, the electricity dancing around the ship's yard arms overhead and the sparkling shimmer in the water below, were not really the same thing. The glow down below was produced by biology, by living things. The electricity up above was produced by physics, by non-living things.

Do these two categories, biology and physics, really exist? Are they really “out there” in the world, separate and distinct? Or are they merely categories of convenience boxed up in the minds of scientists? Is such a distinction between animate and inanimate truly helpful? I'd like to propose that both of the lightshows that Darwin witnessed, the one above him and the one beneath, were really part of the same universe. They were both part of a single living system. *Both* were very much alive. The universe itself is alive...with electricity.

For regular readers of *Forbidden Realms*, this may seem like a painfully obvious thing to point out. However, as we will see, we've got to explore a topic like this thoroughly in order to undo the subconscious hold that the animate-versus-inanimate worldview has over us. It is not enough to simply get behind a podium and announce that “All is one” and “Everything is alive.” The intellect might think that saying it is enough, but the deeper recesses of the subconscious will remain troubled and unconvinced. To

thoroughly erase our ignorance, we must thoroughly explore the imaginary boundary lines that we secretly believe to be real. We must explore...forbidden realms.

Saint Elmo's Fire

At least twice during his sea voyage, Darwin was fortunate to witness a rare meteorological phenomenon: Saint Elmo's fire. It's a lightshow that sometimes manifests around the masts of sailboats. It can also happen on hilltops, exuding from treetops or from the tips of broadcast antennas.

Theoretically, Saint Elmo's fire happens when the surface of the Earth, including its waterways, becomes saturated with a higher-than-usual charge of static electricity. This electricity then leaks back upward and outward into the atmosphere, producing a coronal discharge. The energy seeps upward through almost anything that is connected to the ground. If it is strong enough and conditions are just right, it becomes visible in a "glow mode," as sizzling sparks of blue and purple light that dance on the tips of pointed objects, such as the yard arms of a ship. Sometimes even from a horse's ears or a person's fingertips!

Saint Elmo's Fire (artist unknown)

Bioluminescence

As evidenced from his travel-diary entries, Darwin also witnessed another phenomenon of a seemingly different kind of energy. The water below him was alive with bioluminescence. Any motion of a creature under the waves would stimulate microscopic plankton to emit light, in the same way that fireflies flash at night. I've seen this numerous times myself. The plankton are so small that you can't see them, so the water itself seems to glow. I recall one night on the east coast of Florida when I was rowing a dinghy in the Indian River lagoon. As the oars scooped through the water, shimmering balls of green "fire" swirled off of their tips.

Bioluminescence

To explore how St. Elmo's fire and bioluminescence are the same, let's dive deep. We will explore the two categories of physics and biology — and hopefully avoid getting caught up in them. We can begin by looking at what's going on above Darwin as he looks up into the sky. There is no proper place to begin, really, but for convenience's sake, we'll begin in outer space...

What Is Outer Space Made Of?

Space is not empty. It is electric. Our solar system is thinly pervaded with matter in its fourth phase: plasma. As you will recall from high school chemistry class, matter appears to exist in (at least) four different phases: solid, liquid, gas, and plasma. Not surprisingly, these four states are the same phenomena observed by ancient mystics — the classical four elements: earth, water, air, and fire. These four were the original elements before modern science commandeered the word “element” for the creation of the periodic table.

Does matter really consist of particles? Is there really a smallest particle possible? Or is particle theory simply a way of using geometry to explain matter? The transparent, fluid-like nature of plasma throws the idea of a granulated, particle-based universe into question. Matter in its plasma state behaves like a tenuous fluid, and it is completely transparent to light. The notion of it being composed of such things as electron and proton *particles* is merely a theory. A useful way for predicting the behavior of matter, but a theory nonetheless.

The word “plasma” was coined by scientist Irving Langmuir, who observed that matter with a high electric charge tends to organize itself into fluid-like zones or membranes. Some membranes are dense, and others are less dense. To him, this alternating, membranous patterning looked like a living substance, so he named it after a living substance already known at the time.

According to particle theory, the plasma in space consists of a mixture of positively charged atoms, negatively charged atoms, and free-flowing electrons. One of the most interesting things about plasma is that it conducts electricity. The “electrons” flow through it as easily as they flow through a copper wire. Even more interesting is that the electrons tend to flow in “self-organizing” patterns. To witness this, you need only look at a plasma generator, the kind you might obtain in a toy store.

This self-organizing property of matter occurs everywhere that electricity is present — and as any astrophysicist will tell you, electromagnetism pervades every nook and cranny of creation. The known universe is more than just a giant gravitational field. It’s also an electromagnetic field, and over 99 percent of all known matter exists in an electrically charged plasma state. In addition to being suffused with plasma, space also buzzes with the “background static” of electromagnetic radiation. Some of this radiation we can see and feel, but most of it we can’t. *All* of it affects us.

Does this mean that outer space has some kind of pseudo-organic structure to it? Yes, apparently so. It’s invisible to the naked eye, but it seems as though space itself is some kind of proto-organism, alive with electricity.

There is a small amount of plasma around you right now in the air you’re breathing. You can’t see it because it’s in its “dark current mode.”

Plasma that emits light is in a “glow mode,” as occurs around the Sun in its corona. Or in a neon sign in a restaurant window. Similar to the Sun, the Earth’s atmosphere emits its own coronal discharge. The aura-like “air glow” of the Earth’s ionosphere — visible from the International Space Station — is an example of plasma’s glow mode. It’s a membrane of light around the Earth, which results from higher electric charges in higher-than-usual densities of plasma. According to physics, the various colors of the Earth’s atmospheric “aura” result from plasma mixing in with various kinds of gases.

A third mode of plasma is called “arc mode,” and it’s even more densely charged. Lightning is the most obvious example of arc mode.

The “Membranes” of Earth’s Air Glow

Plasma exerts force upon denser forms of matter. It does this through static electricity — the same way that articles of clothing sparkle, pop, and “gravitate” together as you remove them from the clothes drier. Static electricity is, therefore, part of what determines how solids, liquids, and gases organize themselves into the mysterious patterns we see in outer space. This flies in the face of orthodox astronomy, of course. The standard assumption, until recently, has been that the intricate patterns of matter floating in space have been formed entirely by gravity.

Gravity Versus Electricity

The solar system, as we understand it with our eyes, exists like a giant flat wheel in space. That is, the Sun and its eight known planets float along a nearly perfect two-dimensional plane, as though some kind of intelligence has flattened them out and organized them into a disk. How has this happened? Primarily through gravity, motion, and collisions. But also through static electricity.

The *gravity* principle is easy to understand. The planets and asteroids of our solar system orbit the Sun because they are caught in its gravity well (or more accurately, they are caught in the collective gravity well of all the matter in the solar system).

In three-dimensional space, you cannot have several disks of matter rotating at different tilts around the same object. Multiple wheels will eventually cancel each other out. On the scale of our solar system, billions of years of swirling debris have naturally produced many collisions. The debris of one orbiting wheel collided with the debris of other possible wheels. In this way, the various wheels canceled each other out until only one wheel remained — and this leaves us with the orbital plane upon which the Earth, planets, and asteroids revolve today.

There still are a few objects that orbit the Sun on other tilted planes. The dwarf planet Pluto is an example. This is probably because these objects were caught in the Sun’s gravity well later on, after the solar system had already formed. As these objects —

comets, for example — continue to orbit the Sun on their own planes, they eventually collide with the planets or asteroids on the main orbital plane. Apparently, it was just such a comet strike that devastated the Earth hundreds of millions of years ago, wiping out the dinosaurs. The debris of these catastrophic explosions eventually becomes part of the solar system's single flat disk of swirling matter.

The Solar System's Orbital Plane

The *electric* principles that contribute to the structure the solar system are not as easy to understand, but it is becoming clear that there is more going on than just the planets, asteroids, and comets clunking around in a gravitational orbit. *Most* of our solar system is actually invisible.

It probably shouldn't come as a surprise that the Sun has a powerful electromagnetic field that emanates outwardly in an incomprehensively large, *three*-dimensional bubble filled with plasma. Some of this field is apparent to us as light, which our eyes

have evolved to detect and our skin has evolved to feel as warmth. However, most the Sun's energy cannot be directly seen or felt. That is, most of its electromagnetic field remains hidden, even as it exerts powerful influences upon the planets, asteroids, and us. Influences that we are only beginning to understand.

Mathematically, electromagnetic fields have no limit, proceeding outward without end, pervading and merging with the background radiation of the entire universe. But they do tend to form plasma membranes as they emanate. Kind of like bubbles and conduits in space. These bubbles and conduits of electricity are invisible to the naked eye because they are not in glow mode. If we could see them, they would resemble a kind of organic structure with "organs" and a kind of circulatory system. The gravity that holds the planets in orbit is not the only thing that structures the solar system.

The plasma that occupies our Sun's electromagnetic bubble is called the Heliosphere, and according to particle theory, it is composed more of electrons than whole atoms. It has a *negative* electric charge. The plasma that occupies the flat orbital disk of the solar system — where we are — has a net electric charge that would be considered *positive* in relation to the rest of the Heliosphere.

However, our orbital disk of planets and asteroids is more complex than most of the Heliosphere. It is more membranous than the rest of the Sun's spherical aura. This happens because it contains more matter in solid, liquid, and gas phases. Matter in these more dense phases tends to get positively charged when it is hit by sunlight. The Sun's radiation is powerful enough to blast negatively charged electrons off of it.

The result is a soup of plasma that bathe's the Sun's eight known planets in a membranous electric field. A field with positively charged zones and negatively charged zones. This field consists of free-flowing electrons that dance between and around areas of positively charged space.

What does this mean? The formation of the planets and the asteroid belt, we have been learning lately, has as much to do with static electricity as it does with gravity and motion. The asteroid belt has formed not only because of gravity but also because of the membranous quality of electrically charged space. In other words, because of magnetism and static electricity. On a cosmic scale, electromagnetic fields are much more powerful than originally thought.

This idea is difficult for most scientists to accept because it proposes that structures in space are formed by more than just gravity. The astonishingly beautiful rings around the planet Saturn, for example, have formed not only because of the power of gravity that holds them in orbit, but also because of Saturn's immensely powerful electro-static energy field. It's aura, if you like. The plasma membranes in this field are not normally visible to the naked eye because they aren't in glow mode. They *are* visible, however, in the patterns they form. They create amazing structures in debris fields — similar to the way a magnet can reveal its magnetic field in a sprinkling of iron filings.

When we are up close to dense physical objects (like the Earth), electrostatic forces seem less powerful than gravity. However, electrostatic force gradually becomes more powerful than gravity as one proceeds out into the far reaches of space. The spiral arms of galaxies don't look like the rings around Saturn. That's because they are arranged more in accordance with membranous tendrils of electromagnetism than they are by gravity.*

Electric Stars

The most powerful source of electromagnetic-field energy, for us, is the Sun — simply because it is the closest star. Just as Saturn has both moons and rings, so does the Sun also have its “moons” (the planets) and rings (the asteroid belt and the Kuiper belt). The Sun's two known rings have formed along two of its static-electric membranes.

The Sun's outermost membrane is invisible. It's an incomprehensibly large bubble, a subtle magnetic forcefield in space. It probably protects the entire solar system from cosmic rays that issue from other star systems and black holes.

The Sun fills up its magnetic bubble with plasma. It erupts with energy continuously, sending plasma hurtling through space. The Earth is continually blasted by the Sun's “solar wind.” This wind fluctuates in intensity, which means that there actually is a type of “electric weather” in space. NASA even delivers space-weather forecasts.* When there is a large storm on the Sun — which usually involves solar flares — it sends out powerful gusts of solar wind. This causes the amount of plasma building up on the sunward side of the Earth to increase, producing an even stronger airglow membrane in the upper atmosphere.

Like the Sun, the Earth also exists inside its own magnetic forcefield. As do all of the planets. The Earth's magnetosphere (it's magnetic field) produces a large bubble around the Earth, which deflects most of the Sun's solar wind.

During solar storms, the solar wind becomes so strong that the Earth's upper atmosphere erupts in a dazzling glow mode at the north and south magnetic poles. Most of the solar wind is completely deflected by the Earth's magnetic forcefield, but some of it concentrates at the poles, producing the famous northern lights (aurora borealis) and southern lights (aurora Australis). This phenomenon is, essentially, Saint Elmo's fire on a massive scale. There have been times when the gusts of Solar wind have been so powerful that northern lights can be seen as far south as Hawaii.*

The Sun's electromagnetic field, combined with its constant blast of plasma, ensures that the Earth itself is continually charged up with electricity. In fact, solar storms in space can get powerful enough to short out entire electrical grids on the surface of the Earth. Power companies have to monitor NASAs space-weather forecast so that they can take precautions.

The Earth's Magnetic Field Deflecting Most of the Solar Wind

The Electric Membranes of Earth's Atmosphere

Beneath the outer envelope of Earth's magnetic field, there are other positively and negatively charged zones. The electricity in these zones exerts force on the gases, dust, and water vapor in Earth's atmosphere, creating various layers of varying composition, as well as different types of clouds.

As we descend toward the Earth's surface from space, the atmosphere's electric charge changes from negative to positive, then back to negative, and then to positive again. The Earth's surface itself has a negative electric charge.

At the highest levels of the atmosphere, the space plasma beneath the magnetosphere is negatively charged. Below that, the Earth's ozone layer (which deflects a lot of the Sun's ultraviolet light) is positively charged. The ozone layer hovers above the troposphere (the layer of atmosphere in which we live). The top of the troposphere is pervaded by an intense positive charge. Then there is another layer of the troposphere, down below, which harbors an intense negative charge. This lower layer hovers about 2,500 feet above the surface of the Earth. It is invisible, of course, but you can still see it. It makes the bottoms of cumulus clouds appear flat.

Flat-bottomed clouds: One of Earth's static-electric membranes is visible in its effect on water vapor.

Electric charge is relative, so when the negative charge at the bottom of a cumulus cloud intensifies, the charge of the Earth's crust is considered positive in relation to it. When the charge differential is strong enough, plasma erupts into its arc mode. Lightning!

Lightning also erupts in a second layer of atmosphere above the flat bottom of rain clouds. This happens due to the difference in charge between the top and bottom of the troposphere. And recently, scientists have discovered a *third* layer of lightning activity above the ozone layer: "space lightning." This is plasma that erupts into arc mode between the stratosphere and the ionosphere — essentially between the Earth and space. Most of this "space lightning" is plasma in its arc mode, but some of it dances very briefly in glow mode, just like aurora borealis.

Space Lightning (Notice the three layers of lightning.)

Electric Clouds

Clouds are formed by more than just the sunlight heating up water. It's true that infrared radiation (heat) causes water to evaporate, rise, and then condense in the colder upper atmosphere. But why do clouds clump together the way they do? Why don't they simply spread out into a thin layer of haze?

Clouds coagulate into such beautiful, fluffy clumps because of static electricity. The clumpier the cloud, the higher the net electric charge. Water, when it is bombarded with the Sun's infrared light not only tends to evaporate. It also, structures itself into alternating negatively and positively charged zones — similar to a crystal. It does this in both its liquid and gaseous forms. When water structures itself this way, it is building up an electric charge, very much like a battery. Structured water always has a net negative charge, and this special kind of water is essential to all forms of life on Earth.

Structured water: Water molecules self-organize into a crystal-like lattice of electrically charged membranes.

Notice how water on Earth behaves similarly to plasma in space, structuring itself into negative and positive membranes. The pseudo-organic nature of plasma and the pseudo-organic nature of water on Earth appear to present a clue as to how biological life has formed. Not as a special situation on Earth, but as a phenomenon that is potentially present everywhere in the universe.

It won't surprise you, then, that an intensification of the Sun's solar wind in space super-charges the Earth. For one thing, it increases the frequency of lightning in the atmosphere. This is a direct result of the Sun feeding the Earth with electrons. The electric charge not only accumulates in water but also in the crust of the Earth. The ground beneath your feet maintains a constant negative charge, and this fuels life on the surface with a constant stream of electricity. It may even be what "sparked" biological life to emerge in the first place.

The constant stream of electrons is, for the most part, invisible to the naked eye. However, in very rare cases, it breaks out in its glow mode. That's what creates Saint Elmo's fire. Darwin was bearing witness to the Earth's release of the Sun's life-giving electricity back upward into the atmosphere.

Electric Organisms

The Sun may be Earth's most powerful source of electricity, but for you, as you sit reading this article, there is an even more immediate and intense power source: your own body. It would appear that biological life has taken the Sun's electromagnetism and learned how to store it, as well as how to generate the same kind of electric energy on its own. The entire, combined ecosystem of the Earth is capable of capturing and storing sunlight in the form of chemical fuel. It can then re-release that energy to power itself — mostly in the form of electricity. This storage-and-release capability is what makes biological life possible. You are quite literally a walking, talking electric battery, capturing sunlight from the environment, storing it as chemical fuel, and re-releasing it to power your bodily functions.

How does this happen?

Despite Earth's protective magnetic membrane and its ozone layer, the Sun's electromagnetic energy still reaches the Earth's surface in the form of visible light, heat, ultraviolet light, and electricity. As you know, plants rely on light. They use a process called photosynthesis, absorbing electromagnetic energy (mostly in the form of light and heat), using it to create two things, an electric current and carbohydrates. To make carbohydrates, plants extract the carbon from carbon dioxide and combine it with oxygen and hydrogen (this process, as we know, releases excess oxygen into the atmosphere so that animals can breathe). When plants do this, they are essentially binding up solar energy in the form of matter.

Other forms of biological life can then seize upon this matter (in the form of carbohydrates — as well as fats and proteins) and burn it, turning it back into heat, light, and electricity. In fact, almost all of the energy you generate from food comes in the form of electricity. And that electric charge came, originally, from the Sun.

Most of the energy being released by your body right now is electric, but some of it occurs as photons — as light. Your body has a very slight glow in the visible light spectrum, too faint (supposedly) for the naked eye to see. And of course, you are warm-blooded. Your body releases infrared light too. It radiates heat.

Some creatures are capable of generating light that's bright enough for humans to see. These creatures are bioluminescent. For these creatures, the principle is the same as it

is for us, except that they can generate a lot more photons than we do. We mostly just release electrons.

Your body also has a magnetic field, like the Earth. Your body even has “north” and “south” poles. This results mostly from the heart, which generates an enormous amount of electricity. The pulsing electric field around your body resembles that of the Earth’s magnetosphere. It exists in a torus shape, similar to a donut.

The torus

Human Photosynthesis

Humans aren’t plants. We can’t absorb sunlight to make food. Or can we? It’s true, most of the solar energy we store in our cells we get indirectly, by eating plants, animals, and fungi that have stored the sunlight for us. However, we now know that humans are capable of creating *some* nutrients directly from sunlight.

Human skin manufactures vitamin D and various forms of sulfate when it is exposed to ultraviolet (UV) light (specifically, UVB light). Also, the cells throughout your body use infrared and near-infrared light to manufacture intracellular melatonin, a very powerful antioxidant.* It would appear that plants aren’t so unique after all. Human beings have also evolved a form of photosynthesis — since photosynthesis literally means “the manufacture of substance from light.”

Electricity as a Nutrient?

What about electrons? Is it possible for us to absorb electricity directly from the environment? Yes, of course! Humans are drenched in the electric field of the Earth. We breathe in electrons from the air, and we soak them up from the ground as we walk barefoot. Nature is charged up with electromagnetic force, and we are drinking it in, in the form of photons and electrons.

In addition, the Electromagnetic fields of the Sun and Moon are very powerful — (1) because the Sun is so massive and energetic and (2) because the moon is the closest heavenly body. The solar system's planets also have electromagnetic fields, and yes, these fields influence the Earth too. There really does appear to be some substance to the notion of “the music of the spheres” and to the ancient pseudoscience of astrology.

Electric Earth

It is estimated that lightning strikes the Earth forty-five times every second.* Most of the electric charge in the Earth's crust is thought to be created by lightning. I wonder whether this is really true. I suspect that the negative charge occurs more through invisible means — through the magnetism of plasma in its invisible dark mode — but I can't be sure. What I do know, though, is that the ground beneath your feet is electric. The excess electrons that have been driven into the Earth's crust tend to flow back out of it, when given a chance. They tend to flow upward and linger near the surface, seeking to leak back out into space. They even accumulate at the tops of hills.

Is it any wonder that hilltops and mountaintops are sacred places? Or why the Mayans built their pyramids with magic-ritual platforms on top of them? Why are we instructed to take off our shoes when entering a holy place? Static electricity, the energy of life, tends to concentrate at the highest points in a given landscape. In mound structures and pyramids, it gets funneled upward into a concentrated spot, and humans can benefit from it by walking barefoot in such places.

When you walk barefoot on the grass — or on exposed concrete — the Earth's electrons flow up into you. The same kind of energy you produce from food (electricity) is also available directly from your environment. There is a new science known as Earthing, in which people deliberately connect themselves to the ground to take advantage of the free-flowing electrons in the Earth's crust.

Electrons are essentially an antioxidant in its purest form. Usually, when we think of antioxidants, we think of vitamins and hormones — like vitamin C, glutathione, or melatonin. But these are considered antioxidants simply because they supply your body with extra electrons, which help reverse oxidative damage caused by our oxygen-burning metabolism. It is actually the electrons themselves that are the antioxidants. What this means is that right beneath your feet, there is a more powerful antioxidant than you'll find in a pill bottle. It's free, it comes from the stars, and it's a nutrient you can absorb directly from the Earth.

The intensity of the electrons in the Earth's crust tends to fluctuate based on Earth weather, space weather, and the cycles of darkness and light we experience daily. This creates an ebb and flow of electricity through the Earth, known as telluric currents. The midday sun energizes electrons the most, exciting them to spread to other areas of the Earth that are less energized.

The Earth's electric charge also vibrates at a measurable rate, something called the Schumann resonance. This vibration, it is said, corresponds to the resonance of human brain electricity. Supposedly, the alpha-brainwave state — a state of relaxation, meditation, and suggestibility — has resulted from our millions of years of evolution immersed in Earth's Schuman resonance. When you are relaxed, happy, and healthy, your "aura" really does harmonize with that of the Earth.

Electric Air

Humans also absorb electricity from air, though it is not clear how much. Studies have shown that ionized air — that is, air charged up with extra electrons — seems to energize the brain. It appears to uplift moods and make people in office environments more productive.*

Taoist practitioners claim that humans absorb electricity in their nasal canals, and I would tend to agree with this. Taoist temples and hermitages are usually located on mountains, at the same altitude as the flat bottoms of rain clouds — at the layer of the troposphere that tends to be negatively charged. Taoists also suggest living near flowing water or near the ocean, where the wind can carry ionized air into your home.

Electrically charged air purifies itself. Apparently, negatively charged molecules stick to particles of dust and soot in the air and cause them to precipitate out of the air. This

also happens in liquid water and in water vapor. Both air and water, when negatively charged, create an “exclusion zone.” This is a static-electric field that causes debris to get repelled out of it. That’s why healthy air and healthy water sources are so clean and clear. It is also why desert winds tend to be so dusty and unhealthy. Desert winds have a net positive electric charge, and they are known to cause irritability and sickness.*

Ionizers

I live in South Florida, on the East coast, where we get a nearly constant ocean breeze. However, Florida can get quite hot and humid for six months out of the year, and that means air conditioning. Air conditioning tends to de-ionize air. To fix this, I have six different ionizers installed in my home. They are always running, and I clean them once per week. This allows me to live an urban lifestyle and still benefit from the air quality of a Taoist mountain hermitage, as though I live next to a waterfall.

A typical ionizer

There have been many dire warnings about ionizers because they tend to produce a small amount of ozone. You can actually smell ozone when it’s present. The odor is similar to that smell of “fresh air” you might notice near a working copy machine. Ozone in high quantities has an irritating effect on the respiratory system, and industrial ozone generators can produce it in high enough quantities to harm you.

But the real reason why ozone attracts so many dire warnings is that ozone always accompanies smog. Ozone is easy for meteorologists to measure, so the amount of ozone that's present near a city helps determine the amount of smog that is present along with it. Ozone's association with smog is what gives it a bad rap as a harmful "pollutant."

However, it appears that ozone is a natural substance that results when static electricity in the atmosphere removes dust and soot from the air we breathe. It is a biproduct of the Earth's natural ionizing system. In fact, the ozone level in a place without smog — in a mountain forest, for example — often exceeds the levels that meteorologists believe to be safe in smog-infested cities. It would appear that ozone, in small amounts, is perfectly natural and harmless.

I'm a freediver. I practice breath-holding regularly, and I even use a pulse oximeter to measure the oxygen levels in my blood while I hold my breath. If my lungs were being damaged by ozone, I would know it.

Earthing Bedsheets

Because humans don't touch the earth very much anymore, we must find innovative ways to absorb energy from the Earth. This is not so easy for city-dwellers to do, unless we're willing to risk stepping barefoot on someone's discarded chewing gum.

One of the best ways to absorb electrons from the Earth is to sleep on bedsheets that conduct electricity. Earthing kits are quite affordable. They consist of pillowcases and bedsheets that you can plug into the electric grounding socket of a wall outlet. That grounding plug, the small U-shaped hole under the two slots, connects to the Earth. It is designed to allow any excess charge during an accidental short circuit to drain away harmlessly into the Earth outside your home. You can buy a simple pillow case, so that your face and neck are in contact with the silver grounding wires there, or you can get an entire earthing bedsheet and sleep on it, mostly naked.

As you know, electrons tend to flow upward to higher points in the landscape, so they will naturally enter your home through the grounding ports in your wall outlets. When you use an earthing sheet, the electrons flow into the silver wires woven into the threads. They then flow into you all night long. You can wake up in the morning, supercharged with pure antioxidants.

Though many mystics — particularly Taoists — have known about the value of “earth energy,” the modern-day science of earthing is still in its infancy. To learn more, you can check out the book *Earthing: The Most Important Health Discovery Ever!* — by Ober, Sinatra, and Zucker.

As you can see from this article, as well as the one previous to it, it is not only biological life that organizes itself according to membranes and conduits filled with electric charge. The entire universe appears to do that. It would appear that the ancient Hermetic maxim of “As above, so below” is more than just a philosophical principle. It is also a principle of physics, cosmology, and biology. Life on the surface of the Earth really does seem to be an image of the same processes going on up there in the heavens.

Also in this article, I’ve been talking about boundary lines, membranes, particles, etc. I’ve been using geometric and topological terms to describe the universe as though entities such as boundaries, surfaces, points, lines, and spheres actually exist. *Do they?*

In the next article, we will explore the various geometric shapes that humans use to perceive, map out, and understand the world around them. We will do this with an eye toward seeing *through* these devices — so that, perhaps, we can set them aside and see the universe naked, *as it actually is*.

In the ancient mystery traditions, new candidates for initiation would encounter a mysterious woman during their ceremonies. She was nature personified in the form of a beautiful woman, the naked body of whom is invisible. Her true beauty is only suggested by the contours of the robes concealing her shapely figure.

She speaks her eternal challenge: “I am the goddess Isis. I am the all. I am the past, the present, and the future. No mortal has yet lifted my veil and lived.”

Is that true? Or is it possible to see beneath the outer garments of nature and live? We will see in the next article. Stay tuned!

Health Biohacking Enlightenment Physics Biology